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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/091,797 | 03/06/2002 | Barry Fruchtman | IBM 0116 | 8935 |

7590 04/14/2005

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EXAMINER

TRAN, AMY

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2157

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,797

Applicant(s)

FRUCHTMAN ET AL.

Examiner

Amy Tran

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Jan 21, 03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed on March 6, 2002. Claims 1-20 are pending examination. Claims 1-20 represents multi-session no query restore.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dang et al. (hereinafter Dang) US Patent 6,718,352 in view of Tam US Patent 6,411,969.

As to claim 1, Dang teaches a method of restoring data in a computer network system wherein a storage pool coupled to an associated storage area network (SAN) (column 15, lines 28-62) comprising the steps of:

coordinating access to said data stored in said storage pool by tracking a plurality of data portions of said data to be restored (Dang, column 3 lines 5-18, column 13 line 60 – column 14 line 6).

Dang doesn't explicitly teach "plurality of client system may participate in said restore" and "blocking access to each of said plurality of data portions that have been restored by one of said plurality of client systems". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract).

Tam does teach plurality of client system participate in restore and blocking access to each of plurality of data portions that have been restored by one of said plurality of client systems (Tam, column 2 lines 14-42, column 8 lines 32-33).

It would have been obvious for one of ordinary skill at the time of the invention was made to modify Dang by combining Tam's teaching of a system wherein a plurality of client system have access to a storage pool and blocking access to each of plurality of data portions that have been restored by one of plurality of client systems with Dang's teaching of managing data portions stored on data storage devices. One would be motivated to do so to provide users such as administrators an ability to restore desired data portions and it would prevent the duplicates of data restoration and increase the data restoration system reliability.

As to claim 2, Dang teaches the method of claim 1, Dang doesn't explicitly teach "coordinating access step occurs during a plurality of sessions". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract). Tam does teach accessing occurs during a plurality of sessions (Tam, column 2 lines 14-42, column 8 lines 19-21).

It would have been obvious for one of ordinary skill at the time of the invention was made to modify Dang by combining Tam's teaching of accessing occurring during a plurality of sessions with Dang since doing so would eliminate the need to exit one session before accessing the storage for another session, saving lots of time.

As to claim 3, Dang teaches the method of claim 1, wherein said coordinating access step is interruptible (Dang, column 10 lines 60-62).

As to claim 4, Dang teaches the method of claim 1, wherein said coordinating access step comprises the steps of: constructing a master restore table comprising said plurality of data portions to be restored and an associated location of said plurality of data portions in said storage pool (Dang, column 9 line 55 – column 10 line 6).

As to claim 5, Dang teaches the method of claim 1 and claim 4, wherein said storage pool comprises a plurality of storage devices and said associated location of said portions includes a location in one of said storage devices (Dang, column 15 lines 39-58).

As to claim 6, Dang teaches the method of claim 1, claim 4 and claim 5, wherein said data portions are provided concurrently from said plurality of storage devices to a target restoration device (Dang, column 15 lines 47-57).

Dang doesn't explicitly teach "accessible by said plurality of client systems". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract). Tam does teach restoration devices which are accessible by plurality of client systems (Tam, abstract, column 2 lines 14-42).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to modify Dang by implement Dang restoration devices accessible

by plurality of client system as Tam's teaching because it would provide users such as administrators an ability to restore desired data portions.

As to claim 8, Dang teaches the method of claim 1 and claim 4, wherein said master restore table is identified by an associated token and a client system participating in a restore gains access to said master restore table by use of said token (column 9 line 55 – column 10 line 6).

As to claim 9, Dang teaches the method of claim 1, claim 4 and claim 8, Dang doesn't explicitly teach "deleting master restore table after restoration of a target restoration device is complete". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract). Tam does teaches an initiating client instruct deletion of said master restore table after restoration of a target restoration device is complete (Tam, column 4 lines 12-21).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to modify Dang by implement client to instruct deletion of master restore table after restoration of a target restoration device is complete because doing so would provides the data restoration system reliability.

As to claim 10, Dang teaches the method of claim 1 and claim 4, wherein said constructing step further comprises automatically portioning said plurality of data

Art Unit: 2157

portions in said master restore table based on said associated location of said plurality of data portions in said storage pool (column 9 line 55 – column 10 line 6).

As to claim 11, Dang teaches the method of claim 1 and claim 4, wherein said coordinating access step occurs before said master restore table is fully constructed (column 9 line 55 – column 10 line 6).

As to claim 12, Dang teaches the method of claim 1 and claim 4, wherein said master restore table is saved in a storage management server, said storage management server coupled to said SAN (fig 2, column 4 line 66 – column 5 line 12, column 15 lines 28 - 39).

As to claim 13, Dang teaches a computer network system for restoring data comprising:

a storage pool coupled to a storage area network and a storage management server (SAN) (Dang, column 15 lines 29 – 62); and wherein said storage management server is configured to coordinate access to said data stored in said storage pool by tracking a plurality of data portions of said data to be restored (Dang, column 3 lines 5-18, column 13 line 60 – column 14 line 6).

Dang doesn't explicitly teach "plurality of client systems" and "blocking access to each of said plurality of data portions that have been restored by one of plurality of client systems". However, Tam teaches enhanced system and method for management of

system database utilities (Tam, see abstract). Tam does teach plurality of client systems participate in restore and blocking access to each of plurality of data portions that have been restored by one of said plurality of client systems (Tam, column 2 lines 14-42, column 8 lines 32-33).

It would have been obvious for one of ordinary skill at the time of the invention was made to modify Dang by combining Tam's teaching of a system wherein a plurality of client system have access to a storage pool and blocking access to each of plurality of data portions that have been restored by one of plurality of client systems with Dang's teaching of managing data portions stored on data storage devices. One would be motivated to do so to provide users such as administrators an ability to restore desired data portions and it would prevent the duplicates of data restoration and increase the data restoration system reliability.

As to claim 14, Dang teaches the system of claim 13, wherein said storage management server is further configured to construct a master restore table comprising said plurality of data portions to be restored and an associated location of said plurality of data portions in said storage pool (Dang, column 9 line 55 – column 10 line 6).

As to claim 15, Dang teaches the system of claim 13 and claim 14, wherein said storage pool comprises a plurality of storage devices and said associated location of said data portions includes a location in one of said plurality of storage devices (Dang, column 15 lines 39-58).

As to claim 16, Dang teaches the system of claim 13, claim 14 and claim 15, wherein said data portions are provided concurrently from said plurality of storage devices to a target restoration device (Dang, column 15 lines 47-57).

Dang doesn't explicitly teach "accessible by said plurality of client systems". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract). Tam does teach restoration devices which are accessible by plurality of client systems (Tam, abstract, column 2 lines 14-42).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to modify Dang by implement Dang restoration devices accessible by plurality of client system as Tam's teaching because it would provide users such as administrators an ability to restore desired data portions.

As to claim 18, Dang teaches the system of claim 13 and claim 14, wherein said master restore table is identified by an associated token and a client system participating in a restore gains access to said master restore table by use of said token (Dang, column 9 line 55 – column 10 line 6).

As to claim 19, Dang teaches the system of claim 13, claim 14 and claim 18, Dang doesn't explicitly teaches "deletion of said master restore table after restoration of a target restoration device is complete". However, Tam teaches enhanced system and method for management of system database utilities (Tam, see abstract). Tam does

teaches an initiating client instruct deletion of said master restore table after restoration of a target restoration device is complete (Tam, column 4 lines 12-21).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to modify Dang by implement Dang system to initiate client to instruct deletion of master restore table after restoration of a target restoration device is complete because doing so would provides the data restoration system reliability.

As to claim 20, the system of claim 13 and claim 14, wherein said master restore table is configured to automatically partition said plurality of data portions based on said associated location of said plurality of data portions in said storage pool (column 9 line 55 – column 10 line 6).

4. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dang et al. (hereinafter Dang) US Patent 6,718,352 in view of Tam US Patent 6,411,969 in further view of Derek Gamradt, "Backup without disruption: LAN-free, server-free SAN backup avoids disrupting business", issued on May 2001, <http://www.serverworldmagazine.com/monthly/2001/05/backup.shtml> (hereinafter Gamradt).

As to claim 7, Dang in view of Tam teaches the system of claim 1 and claim 4, Dang in view of Tam doesn't explicitly teach "a LAN-free path or a server-free path. However, Gamratd teaches Lan-free, server-free SAN backup avoids disrupting

Art Unit: 2157

business. Gamratd does teach data representative of a LAN-free path or a server-free path from a client to a storage pool (pages 1-5).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to modify Dang in view of Tam by having master restore table comprising data representative of a LAN-free path or a server-free path from a client to storage pool since doing so would allow data transferring between a client and storage pool without hindering LAN performance and without affecting standard network operations.

As to claim 17, Dang in view of Tam teaches the system of claim 13 and claim 14, Dang in view of Tam doesn't explicitly teach "a LAN-free path or a server-free path. However, Gamratd teaches Lan-free, server-free SAN backup avoids disrupting business. Gamratd does teach data representative of a LAN-free path or a server-free path from a client to a storage pool (pages 1-5).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Dang in view of Tam by having master restore table comprising data representative of a LAN-free path or a server-free path from a client to storage pool since doing so would allow data transferring between a client and storage pool without hindering LAN performance and without affecting standard network operations.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Gill et al. US Patent 6,721,766 discloses restoring multiple work items simultaneously from backup and data restore.
- Fletcher et al. US Patent 6,038,379 discloses data backup and restore system for a computer network having generic remote file system agents for providing backup and restore operations.
- Yao et al. US Patent 6,067,636 discloses real time stream server using disk device data restoration scheme.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Tran whose telephone number is (571) 272-4243. The examiner can normally be reached on M-F from 8:30am to 5:00pm.

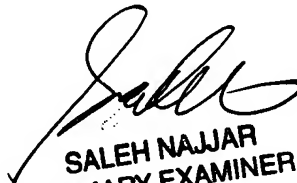
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2157

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

al

3/28/05


SALEH NAJJAR
PRIMARY EXAMINER